IBM Aspera Drive Admin Guide 3.2.0

Windows

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Contents

Introduction

IBM Aspera Drive is a data transfer client application that you run on your desktop or mobile device, to move files or folders quickly and securely through your Aspera transfer server.

Features at a Glance

When Drive is connected to the IBM Aspera on Cloud SaaS platform, you can perform the following tasks:

*   Browse the contents of an Aspera on Cloud workspace from the file browser.
*   Transfer files and packages from within the same browser view.
*   Synchronize local folders with folders on the transfer server, in both directions.

    Note: You cannot synchronize with an Aspera on Cloud folder if it resides on an *AoCts* (Aspera on Cloud transfer service) node. For AoCts nodes, sync is not supported.

When Drive is connected to an IBM Aspera Faspex transfer server, you can perform the following tasks:
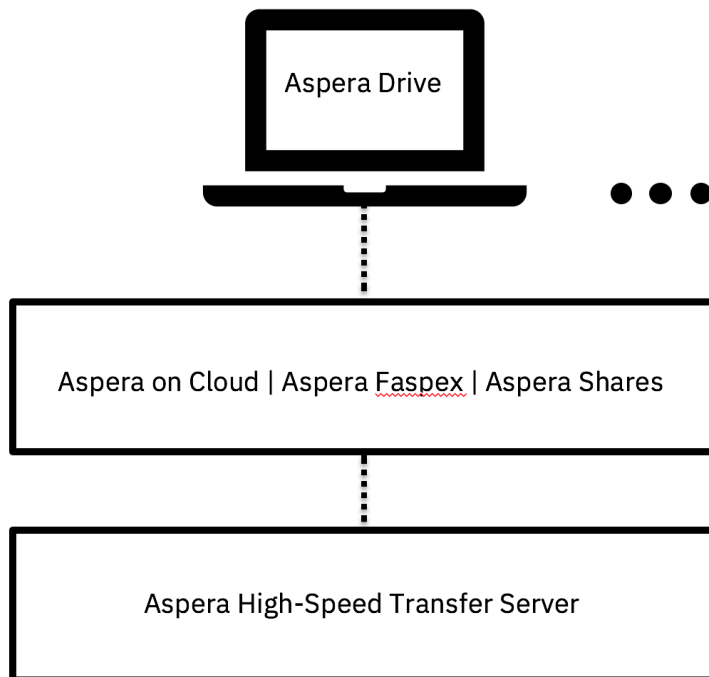
*   Send packages to Faspex users and workgroups.
*   Automatically download packages as they are received.
*   See into Faspex packages from within the file browser.

When Drive is connected to an IBM Aspera Shares transfer server, you can perform the following tasks:

*   Browse and manage the file systems on the transfer server.
*   Transfer files and folders to and from the transfer server.
*   Synchronize local folders with folders on the transfer server, in both directions.

Basic System Architecture

Drive is installed on the user's workstation, for any number of workstations in your team's environment.

```
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                    │                     │
                    │    Aspera Drive     │
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            │   Aspera on Cloud | Aspera Faspex | Aspera Shares │
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            │                                                 │
            │         Aspera High-Speed Transfer Server        │
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```

Drive works with an Aspera web application. In complex environments, it is possible to use more than one of these (for example, both AoC and Faspex).

The HST Server underlies most implementations, and performs the "heavy lifting" of the data transfer. (With Aspera on Cloud, your actual transfers may be performed by cloud infrastructure, rather than by a physical server.)

Installation

Installing Drive

To install Drive for the first time, follow the instructions in this section.

To upgrade an existing Drive installation, see Upgrading Drive on page 5.

Before installing Drive, obtain (from your system administrator) the URL and username/password credentials for at least one Aspera transfer server that you will use with Drive.

1. Download the Drive installer:

   AsperaDrive-*version*.msi

2. Install Drive by running **AsperaDrive-*version*.exe**. Follow the onscreen instructions.

   Note: During installation, the installer closes Windows Explorer.

   You can select the checkbox in the setup wizard to start Drive automatically after installation, or you can start it manually from the Windows **Start** menu. When Drive is running, the Drive icon appears in the system tray.

3. To begin using Drive, use the **Account Wizard** to create an account for use with an Aspera transfer server.

   See the section that best matches your environment:

   • Adding a Drive Account for IBM Aspera on Cloud
   • Adding a Drive Account for IBM Aspera Faspex
   • Adding a Drive Account for IBM Aspera Shares
   • Adding a Drive Account for Cloud Storage

4. Use the **Account Wizard** to create an account for use with an Aspera transfer server.

   See the section that best matches your environment:

   • Adding a Drive Account for IBM Aspera on Cloud
   • Adding a Drive Account for IBM Aspera Faspex
   • Adding a Drive Account for IBM Aspera Shares
   • Adding a Drive Account for Cloud Storage

Upgrading Drive

To upgrade an existing Drive installation, follow the instructions in this section.

1. Check the release notes for information on new features and fixes since your last installation.

2. In the Windows system tray, right-click the Drive icon and select **Check for updates**.

3. If a newer release is available, download the Drive installer from the **Check for updates** link.

4. Install Drive by running **AsperaDrive-*version*.exe**. Follow the onscreen instructions.

   Note: The installer closes Windows Explorer, and if it finds a version of Drive already running on your system, it shuts it down.

Uninstalling Drive

To remove the Drive application from your system, follow the instructions in this section.

Note: The uninstallation process closes Windows Explorer.

Either

- Select **Start > All Programs > Aspera > Uninstall Aspera Drive**.

or

- Select **Start > Control Panel > Uninstall a program**. Locate Drive in the list of installed programs; right-click it and select **Uninstall**.

Working with IBM Aspera on Cloud

Drive with Aspera on Cloud

You can use Drive in conjunction with IBM Aspera on Cloud, a SaaS platform for file transfer and collaboration.

When Aspera on Cloud is integrated into Drive, you can do the following:

- See all your Aspera on Cloud workspaces, files, and packages (sent, received, and archived) in a single view in the file browser.
- Share content with members of your organization.
- Send packages to an Aspera on Cloud inbox.
- See previews of image files.
- Transfer files and folders between your client computer and the server using the Windows Explorer file browser interface, with the following standard Windows Explorer functions:

  - browsing files and folders
  - transferring files to and from your transfer account
  - drag-and-drop [1]
  - creating new folders
  - copy-and-paste

Note: Drive does not currently support adding metadata to packages that it sends. Therefore, ensure that Aspera on Cloud is not configured to have any required metadata fields when sending packages. You can configure optional metadata fields, but Drive will ignore them.

For detailed information on using Aspera on Cloud, see the Help Center within the Aspera on Cloud application.

Adding a Drive Account for Aspera on Cloud

Use Drive's account wizard to configure a new AoC transfer account.

Have the following information available before configuring an account:

- Your organization name in Aspera on Cloud.
- The username and password that you have on Aspera on Cloud.

The steps below assume that you have Drive installed and running.

---

[1] You may not download an entire shared folder by drag-and-drop. Instead, select contents of the folder to download.

To add an Aspera on Cloud account to Drive, do the following:

1. If the Account Wizard is not open, launch it:

    In the system tray, right-click the Drive icon and select **Preferences > Accounts**. Then click to add a Drive account.

2. Select your IBM Aspera product:

    Click **IBM Aspera on Cloud**.

3. Select your organization:

    In Aspera on Cloud, the *organization* is the primary administrative container.

    Either

    *   Enter your IBMid or email address, so that Drive can find your organization for you.

        or
    *   Enter your organization URL.

4. In the new window that opens, sign in to Aspera on Cloud.

5. Set up content synchronization:

    On the **Sync Setup** screen, either

    *   Set up syncing now.

        To do so, either accept the default folder shown for **Place my files in**, or click **Change** to browse for a different folder (or create a new one).

        By default, the sync folder is created inside your **Documents** folder, in a folder with the name you gave for the account in an earlier step. If you choose to use the default folder, it is created automatically.

        or
    *   Set up syncing later.

        To do so, click **I'd rather not set up file syncing now**.

6. If you opted to set up syncing on the previous screen, the Account Wizard prompts you to choose folders to sync.

    You can either

    *   Select **Synchronize with the selected remote folders** and then select the folders on Aspera on Cloud to sync.

        Click the arrows to expand or collapse the folder view, and select the check boxes for the folders you want to sync.

        Choose the sync direction:
        *   **Two-Way**
        *   **Remote to Local** (default)
        *   **Local to Remote**

            Note: For a detailed explanation of your options for sync direction, see

        or
    *   Select **I'll choose the folders to sync later.**

7. Set up package downloading:

    *   Choose **Automatically download my packages to** and enter or browse to a location where you'd like to store your downloaded packages.

        or
    *   Choose **I'd rather not set up automatic downloading now.** You can change this setting later if you wish.

8. If you opted to set up package downloading in the previous step, now select a timeframe:

    *   Choose to download packages from a date in the past.

Select **Download my packages from date sent** and choose an option from the drop-down:

- **Yesterday** (default)
- **A week ago**
- **A month ago**
- **The beginning of time**

or
- Choose to download packages from now on.

9. Set up how you will check for new packages:

- Automatically

   Select **Check for new packages** and select an automated time interval from the drop-down list.

   or
- Manually

   Select **I'll check manually using the Check Now option**.
10. Click **Finish** to complete your Aspera on Cloud account setup.

Working with IBM Aspera Faspex

Drive with Faspex

IBM Aspera Faspex is a file-exchange application built on IBM Aspera High-Speed Transfer Server as a centralized transfer solution. With a Web-based GUI, Faspex offers advanced management options for FASP high-speed transfer to match your organization's workflow.

When working with Faspex, you can perform the following tasks:

- Send packages.
- Receive packages.

Before configuring Faspex to work with Drive, you need the following:

- A computer running the correct version of Faspex. For instructions on how to install Faspex, see the IBM Aspera Faspex documentation.
- Credentials for Faspex user accounts. Users will use these accounts in Drive to connect to Faspex.

Configuring Faspex

To install and configure Faspex, follow the instructions in the IBM Aspera Faspex Admin Guide.

Note: Drive does not currently support adding metadata to packages that it sends. Therefore, ensure that Faspex is not configured to have any required metadata fields when sending packages. You can configure optional metadata fields, but Drive will ignore them.

Adding a Drive Account for Faspex

Use Drive's account wizard to configure a new package transfer account.

Have the following information available before configuring an account:

- The address of the server where Faspex is installed and running.

- The username and password that you have on the Faspex server.

The steps below assume that you have Drive installed and running.

To add a Faspex account to Drive, do the following:

1. If the Account Wizard is not open, launch it:

   In the system tray, right-click the Drive icon and select **Preferences > Accounts**. Then click to add a Drive account.

2. Select your IBM Aspera product:
   Click **IBM Aspera Faspex**.

3. Fill in the fields with the following information about the Faspex transfer server:

Account name	A name for the account. The name is used only by Drive.
Server address	The URL for the server that is running Faspex.

   Click **Next**.

4. Select your Faspex server's authentication method:
   Either

   - SAML Authentication

     If you choose **SAML Authentication**, log in to the Faspex server with this user's SAML credentials.

     or
   - Basic Authentication

     If you choose **Basic Authentication**, enter the username and password that this user has on the Faspex server.

5. If you are prompted to confirm the server's security certificate, indicate whether you trust the server.

6. Set up package downloading:

   - Choose **Automatically download my packages to the following directory** and enter or browse to a location where you'd like to store your downloaded Faspex packages.

     or
   - Choose **I'd rather not set up automatic downloading now.** You can change this setting later if you wish.

7. If you opted to set up package downloading in the previous step, now select a timeframe:

   - Choose to download packages from a date in the past.

     Select **Download my packages from date sent** and choose an option from the drop-down:

     - **Yesterday** (default)
     - **A week ago**
     - **A month ago**
     - **The beginning of time**

     or
   - Choose to download packages from now on.

   Click **Next**.

8. Set up how you will check for new packages:

   - Automatically

     Select **Check for new packages** and select an automated time interval from the drop-down list.

     or
   - Manually

Select **I'll check manually using the Check Now option**.

9. Click **Finish** to complete your Faspex account setup.

Modifying Your Package Download Settings

You can modify the following aspects of a package transfer account:

- The local destination folder for downloading received packages.
- How often Drive should look for new packages.
- Whether to overwrite packages that have the same title.
- Whether to automatically decrypt downloaded packages.

The steps below assume that you have Drive installed and running, and that you have created at least one Drive account that you want to modify.

1. Choose one of the following methods to open Drive's **Accounts** preferences:

   - Right-click the Drive icon in the system tray and select **Preferences > Accounts**.
   - If you have the Drive **Activity** dialog open, select ≡ > **Preferences > Accounts**.

2. On the left side of the dialog, select the transfer server account you want to modify.

3. Under **Account**, you can change the connection settings for the account:

| Field	Description
Account name	The name of the account. The name is used only by Drive.
Server address	The URL for the server, and the port number (if applicable).
Username	The username that you have on the transfer server.
Password	The password that you have on the transfer server.
Do not verify host's SSL certificate	If selected, Drive will bypass the validation of your server's SSL certificate. Select this option if your server's certificate is not valid, but you trust the server.

4. In the **Services** area of the tab, click **Packages: Settings**.
   The **Packages** dialog appears.

5. Modify the fields as needed:

Field	Description
Download received packages to	Specify the folder where downloaded packages will be saved. You can download packages to the default folder: **C:\Users***windowsUsername***\Aspera Drive***driveAccountName* **Inbox**, or you can click **Change** to provide a different folder name.
Overwrite packages that have the same title	When a received package has the same title as an existing package, Drive can either reuse the same folder (overwriting the existing package), or create a new folder for the received package. If you select this check box, packages with the same name as an already existing downloaded package will be downloaded into the existing folder. If a file being downloaded has the same name as an existing file, that file from the older package is overwritten. If you do not select this check box, Drive will create a new folder for the new package, so that the existing one is not overwritten.

Field	Description
	For example, if you have already downloaded a package with a title of **My_Files**, and then download another package with the same title, the files will be placed in **My_Files(2)**.
	If you select this check box, Drive will place the new package into the existing **My_Files** folder instead of creating a new **My_Files(2)** folder. If **My_Files** already contains a file with the same filename, the existing file will be overwritten.
	By default, this check box is not selected.
Do not download packages sent by me	If this check box is selected, packages that you send to yourself or to work groups that you belong to are not downloaded.
	If this check box is not selected, packages that you send to yourself or to work groups that you belong to are downloaded. (By default, it is not selected.)
Packages are downloaded from **Note:** This field is not configurable.	Displays the date since which Drive will search for packages to download. For example, if this field displays **05/06/2014**, Drive downloads any packages that have arrived since May 6, 2014.
Check for new packages	Select the interval in which to check for newly arrived packages.
Automatically unlock encrypted files on download	If you have configured encryption for your packages, you can set Drive to automatically decrypt them when they are downloaded. To do so, select this checkbox and enter the decryption passphrase in the **Passphrase** field.

6. Click **OK** to apply and save your settings, or click **Cancel** to cancel your selections.

Sending Faspex Packages with Drive

1. Open the **Send Files** dialog by doing one of the following:

- In Windows Explorer, right-click the files or folders you want to send and select **Aspera Drive > Send files** .
- If you have the Drive **Activity** window open, click ≡ and select **Send files**.

2. In the **Send Files** dialog, enter the following:

Field or Button	Description
Email or Group	The recipient of the package (required).
Title	A short, relevant title for the package (required).
Notes	A short message to the recipient of this package.
Files	A list of the files and folders in the package that will be sent. To add items to this list, click **Add files** or drag and drop from Windows Explorer into this dialog. **Note:** If the content is a *shortcut* to a folder, the behavior is different with **Add Files** versus drag-and-drop: If you use **Add Files** to add a shortcut to the package, the package contains the folder itself (and its contents). If you use drag-and-drop to add the shortcut to the package, the package contains a shortcut to the folder.

Field or Button	Description
Encrypt sent files	Select this check box if you want to encrypt files before sending them. When you select **Encrypt sent files** and click **Send Package**, you are prompted to enter and confirm a passphrase. When you send encrypted packages, you must provide the recipients with the encryption passphrases so that they can decrypt packages after they receive them.
Add files	Click **Add files** to add a file or files to the package for transfer. You can also drag and drop from Windows Explorer into this dialog.
Add folder	Click **Add folder** to add a folder to the package for transfer. You can also drag and drop from Windows Explorer into this dialog.
Remove	To remove an item from the package to be sent, select it in the **Files** list and click **Remove**.

3. Click **Send** to send the package.

The Drive **Activity** window's **Transfers** tab opens to display the progress of the transfer.

Receiving Faspex Packages with Drive

- **Getting More Information About a Transferred Package**

  a) Right-click the Drive icon in the system tray, and select **Activity**.
  b) Click **Transfers** to view a list of the recent packages that you have sent or downloaded.
  c) With the buttons in the **Transfers** tab, you can perform the following additional tasks:

⊙	Opens the **Transfer Monitor** for more in-progress detail about the transfer. In the **Transfer Monitor**, you can adjust the transfer rate (if settings allow).
⊙	Opens an Explorer window to the transfer destination folder (the "containing folder").
⊙	Stops an in-progress transfer.
⊙	Resumes a stopped or suspended transfer.

  In addition to those actions, you can also right-click a package and select **Remove** to remove it from the list.
- **Clearing a Transfer**

  If a transfer is not currently queued or running, you can remove it from the list:

  On the **Transfers** tab, right-click a transfer in the list and select **Remove**.
- **Looking for New Packages**

  If you have configured Drive to look for new packages at a certain interval, click the **Inboxes** tab to see when Drive will next check for newly arrived packages.

  You can also do the following:

  - To stop checking for packages, click ⊙.

  - To resume automatic checking for packages, click ⊙.
  - To check for packages immediately, right-click an inbox and select **Check now**.

  Note: When you click the **Check now** button at the bottom right, Drive checks for new packages for all Faspex accounts in Drive. When you right-click an individual Faspex account and select **Check now**, Drive only checks for new packages for the selected account.

- **Decrypting Received Packages**

  If you receive an encrypted package, see Decrypting Packages on page 24.

Working with IBM Aspera Shares

Drive with Shares

IBM Aspera Shares is a multinode web transfer application that enables organizations to share content with internal and external users.

Drive accounts that are set up with Shares as the transfer server provide the following functions:

- Users can transfer files and folders between their client computer and the server using the Windows Explorer file browser interface, with the following standard Windows Explorer functions:

  - drag-and-drop
  - copy-and-paste
  - browsing files and folders
  - transferring files to and from your transfer account
  - creating new folders
- You can set up Drive to sync folders automatically on the client computer and on the server whenever contents change. Content changes include

  - modification of file contents
  - changes in file and folder names
  - creation and deletion of files and folders

  The sync feature can be configured to be one-way or bidirectional.

For detailed information on Shares, including system requirements and installation instructions, see see the IBM Aspera Shares documentation

Configuring Shares

Before configuring Shares to work with Drive, you need the following:

- A computer running the correct version of Shares and Enterprise Server.
- On each node on the Shares server, a supported version of Connect Server with a Drive-enabled license.
- Credentials for your users' Shares accounts. Users will enter these account credentials in Drive, to connect to Shares.

Note: If you will use the synchronization feature, you must ensure that the Enterprise Server is configured to use token authentication.

1. Log in to your Shares server as administrator, and go to **Admin > Accounts > Users**.
2. For each Shares user account that will use Drive, click **Edit**.
3. On the **Security** tab, ensure that the **API Login** check box is selected.

   On Shares 1.6 and later versions, this permission is enabled by default whenever new users are created.
4. Create shares, and authorize users for each share.

   For detailed instructions on creating shares and authorizing users, see the IBM Aspera Shares Administrator Guide.

5. For each authorized user of a share, enable the following permissions to allow users to view, edit, or delete files and folders when using Drive:

In Order to Allow This Action on Drive...	...Enable This Check Box on Shares
View	**browse** **download**
Edit	**upload** **mkdir** **rename**
Delete	**delete**

Note: Folders with names that do not follow the proper Windows folder naming conventions do not open in Drive. For details on Windows folder naming conventions, see msdn.microsoft.com.

6. For each Shares user account that will use Drive, repeat these steps.

For more information on Shares, see the Shares Administrator Guide.

Adding a Drive Account for Shares

Use Drive's account wizard to configure a new Shares transfer account.

To set up a transfer account, make sure you have the following information from the system administrator who manages your Shares transfer server:

- A URL for the Shares transfer server, including a port and path (if applicable).
- A username and password that was set up on your Shares transfer server.

The steps below assume that you have Drive installed and running.

To add a Shares account to Drive, do the following:

1. If the Account Wizard is not open, launch it:

   In the system tray, right-click the Drive icon and select **Preferences > Accounts**. Then click to add a Drive account.

2. Select your IBM Aspera product:
   Click **IBM Aspera Shares**.

3. Fill in the fields with the following information about the Shares transfer server:

Account name	A name for the account. The name is used only by Drive.
Server address	The URL for the server that is running Shares.

4. If you are prompted to confirm the server's security certificate, indicate whether you trust the server.

5. Select your Shares server's authentication method:
   Either

   - SAML Authentication

     If you choose **SAML Authentication**, log in to the Shares server with this user's SAML credentials.

     or
   - Basic Authentication

     If you choose **Basic Authentication**, enter the username and password that this user has on the Shares server.

6. If the transfer server supports synchronization, either

   - Set up syncing now.

     To do so, either accept the default folder shown for **Place my files in the following directory**, or click **Change** to browse for a different folder (or create a new one).

     By default, the sync folder is created inside your **Documents** folder, in a folder with the name you gave for the account in an earlier step. If you choose to use the default folder, it is created automatically.

     or
   - Set up syncing later.

     To do so, click **I'd rather not set up file syncing now**.

7. If you opted to set up syncing on the previous screen, the Account Wizard prompts you to choose folders to sync. You can either

   - Select **Synchronize with the selected remote folders** and then select the folders on Aspera on Cloud to sync.

     Click the arrows to expand or collapse the folder view, and select the check boxes for the folders you want to sync.

     Choose the sync direction:
     - **Two-Way**
     - **Remote to Local** (default)
     - **Local to Remote**

       Note: For a detailed explanation of your options for sync direction, see .

     or
   - Select **I'll choose the folders to sync later.**

8. When the screen displays a success message, click **Finish** to exit the Account Wizard.

Modifying a Drive Account for Shares

The steps below assume that you have Drive installed and running, and that you have created at least one Drive account that you want to modify.

To modify a transfer account, do the following:

1. Choose one of the following methods to open Drive's **Accounts** preferences:

   - Right-click the Drive icon in the system tray and select **Preferences > Accounts**.
   - If you have the Drive **Activity** window open, select ≡ > **Preferences > Accounts** .

2. On the left side of the dialog, select the transfer server account you want to modify.

3. Under **Account**, you can change the connection settings for the account:

Field	Description
Account name	The name of the account. The name is used only by Drive.
Server address	The URL for the server, and the port number (if applicable).
Username	The username that you have on the transfer server.
Password	The password that you have on the transfer server.
Do not verify host's SSL certificate	If selected, Drive will bypass the validation of your server's SSL certificate.

Field	Description
	Select this option if your server's certificate is not valid, but you trust the server.

4. If your transfer server supports sync, you can modify sync settings under **Services > Settings**.

The **Sync Settings** dialog opens.

| Field	Description
Synchronize with the selected remote folders	Add or remove server folders to sync.
Local Folder Path	Select an alternate sync folder location on your computer.
Direction	Select the direction of the sync. For more information, see Understanding Sync on page 18.
Continuous Mode	Click to have ongoing sync actions (rather than one-time or manually triggered sync actions).
Reset Sync	Click to clear your sync history and restart the sync relationship. For more information, see #unique_24/ unique_24_Connect_42_resetting_sync

Click **OK** to put into effect any changes you have made.

5. Back in the **Preferences** dialog, click **Save** to put into effect any changes you have made.

Transferring Content

Drive is accessible as a location in Windows Explorer. You can use standard Windows Explorer functions for moving and copying files between the server and your local computer.

1. In Windows Explorer, navigate to **Aspera Drive**. The folders under that entry represent the accounts you have created.
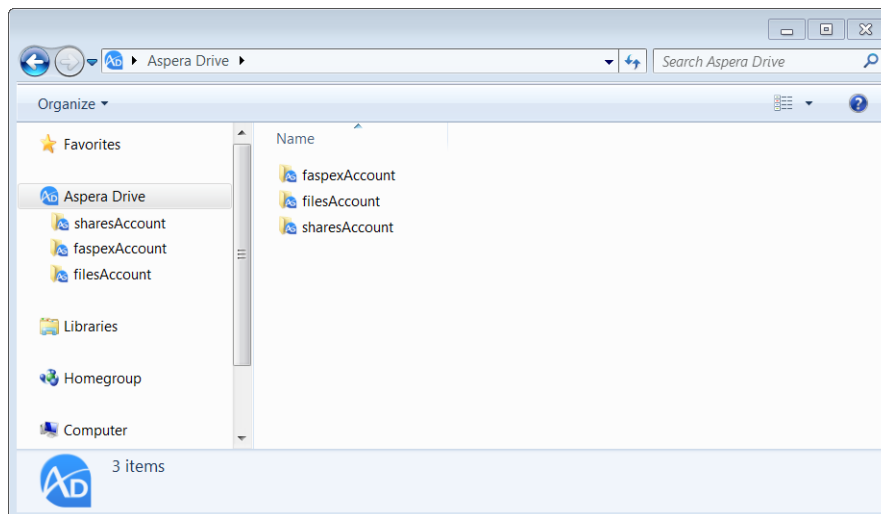

2. Use standard Windows Explorer functions for browsing through files and folders of each account, transferring files to and from your transfer account, or creating new folders.

Note: Depending on your account's permissions on the file transfer server, you might encounter limitations on the following actions on the transfer server:

- browsing
- transfers
- file operations
- context menu options

3. Verify the status of your transfer:

If it is not already open, open the Drive **Activity** window. On the **Transfers** tab, in the list of transferred files and folders, view the status of your transfer.
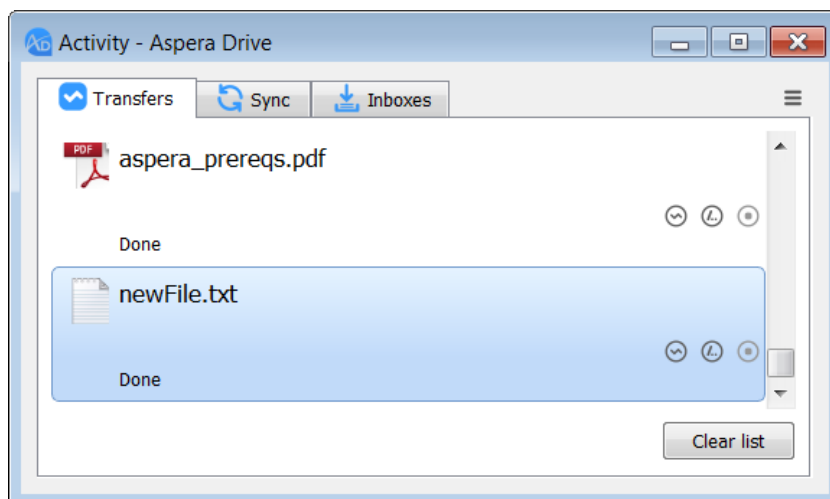
You can see its status during a transfer, or after it has completed.

The buttons on the **Activity** window's **Transfers** tab have the following meanings:

⊙	Opens the **Transfer Monitor** for more in-progress detail about the transfer. In the **Transfer Monitor**, you can adjust the transfer rate (if allowed).
(..)	Opens a Windows Explorer window to the transfer destination folder (the *containing folder*).
⊙	Stops an in-progess transfer.
⊙	Resumes a stopped or suspended transfer.

Note: If a transfer is reported as complete but the file or folder does not appear in Windows Explorer, refresh the Windows Explorer window.

Working with IBM Aspera High-Speed Transfer Server

Drive with High-Speed Transfer Server

Aspera High-Speed Transfer Server (HST Server) is the foundation under Drive transfers with Faspex and Shares, and under Drive transfers with AoC if your AoC uses an on-premises (*tethered*) transfer node. Therefore, in any of these cases, the configuration of your HST Server is fundamental to your Drive implementation.

For the most part, your HST Server does not need special configuration in order to work with Drive. You configure your HST Server for use with Drive in the same way as you would for use with Aspera on Cloud, Aspera Faspex, or Aspera Shares.

Setting Group Ownership

In some cases, you may want to control the permissions on files that are uploaded to a transfer server. To do this, you can set the SGID bit on the directory on the transfer server into which files are transferred.

The steps below set the SGID bit on a directory named **limited**. When the steps are complete, transfers to the **limited** directory will have group ownership rather than user ownership.

Note: The change in ownership applies to Drive transfers to this directory, and to files created in this directory on the transfer server itself, but does *not* apply to transfers performed through sync actions.

1. Set the transfer server to ignore group ownership.

```
> asconfigurator -x "set_node_data;group_ownership,-"
```

2. Change the group associated with the **limited** directory to **mygroup**. The group named **mygroup** is not the user **xfer**'s primary group.

```
>chgrp -R mygroup limited/
```

3. Set the SGID bit for the destination directory **limited**.

```
>chmod -R ug=rwx limited/
>chmod -R g+s limited/
```

4. Verify your changes.

```
> ls -la limited/
drwxrwsr-x 1 root mygroup 1234 Apr 23 10:42 .
```

Your output may vary, but ensure that the **s** is present in the group's permissions.

Synchronization

Understanding Sync

If you are using IBM Aspera Drive with IBM Aspera on Cloud or IBM Aspera Shares, you can use Drive's sync feature to automatically synchronize files and folders between the remote server and the local computer.

Sync Direction

When you set up sync, you must choose the direction of synchronization. Drive can be configured for the following direction settings:

- **Remote to Local**

  This is the default setting. In this configuration, the remote computer (usually a server) retains the master version of the files. The latest content is copied from the server to users' workstations.

- **Local to Remote**

  In this configuration, the user's version of the content is assumed to be the master version, and is copied to a central server. Typically, this setting is employed when users update content frequently.

- **Two-Way**

  In a two-way, or bidirectional, sync relationship, changes in each location are copied to the other location. With this type of sync, the contents of both remote and local are identical after the sync has completed.

Note: When you have two-way sync configured, Drive runs these transfers using the lowest non-zero bandwidth limit that you have set for for automatic transfers. For details on setting bandwidth limits for automatic transfers, see Manual Versus Automatic Transfers on page 28.

If no bandwidth limit is set, Drive runs two-way sync transfers at the maximum rate that the server and network conditions allow.

Avoiding Sync Conflicts

To avoid unexpected results, understand what each sync direction setting means and choose carefully. For example, consider the following scenario:

The system is configured for remote-to-local sync. When the scheduled automatic sync occurs, the latest content is copied from the remote computer to the user's local desktop. A local user then creates a new file. The next automatic sync occurs, but this new file still exists only on the user's computer. *This is the expected behavior in remote-to-local sync.* In this scenario, the content on the destination is not necessarily identical to that on the source.

Initial Synchronization

When you first set up a sync relationship between two computers, the system performs its initial transfer of content from the *source* location to the *destination* (or *target*) location. Depending on the size of the content, this can be a large operation.

Then, when the system performs the next automatic sync, any changes at the source location are copied to the target.

Automatic Sync Versus Reset

Automatic Sync

After the initial transfer, synchronization between the transfer server and client computers occurs automatically, at the regular interval you have set in Drive's Preferences dialog.

In these automatic sync operations, the system transfers *only the changes since the most recent sync*.

Reset Sync

A reset operation is like starting over. Unlike automatic sync, a reset is a wholesale transfer of *all* the content, not just the changed content. Because a reset clears the sync records, you typically perform a reset only after resolving a conflict or changing the sync configuration.

Sync with Aspera on Cloud

If you are using Aspera Drive with Aspera on Cloud, Drive can synchronize files and folders automatically between the remote server and the local computer.

Note: You cannot synchronize with an Aspera on Cloud folder if it resides on an *AoCts* (Aspera on Cloud transfer service) node. For AoCts nodes, sync is not supported. If you are not sure whether the node you plan to use is an AoCts node, check with the AoC admin for your organization.

Before you begin, ensure that you have the following in place:

• Drive account configuration:

  You must have Drive accounts that can synchronize content with your Aspera on Cloud organization.

  For more information, see Adding a Drive Account for Aspera on Cloud on page 6.
• Sync configuration in Drive and in Aspera on Cloud:

  Pay close attention to the configuration of the sync relationship. In all cases, *the settings in Aspera on Cloud override the settings locally in Drive*. Note that if your Aspera on Cloud transfer server nodes are not correctly configured, you may experience sync problems between Aspera on Cloud and Drive users.

For detailed information, see the IBM Aspera High-Speed Transfer Server documentation.

Sync with Aspera Shares

If you are using Aspera Drive with a Shares transfer server, Drive can synchronize files and folders automatically between the remote server and the local computer.

Before you begin, ensure that you have the following in place:

*   Server configuration:

    In order to set up sync with a Shares server, the server must be configured for sync in its **aspera.conf** file and must have the appropriate license.

    For further information on your server's configuration file and license, see the Admin Guide for your Shares transfer server.
*   User permissions in Shares:

    Shares users who will use Drive with sync features must be authorized to perform *create*, *delete*, and *rename* file operations. The Shares admin can set these on the **Authorizations** tab.
*   Drive account configuration:

    You must have Drive accounts that can synchronize content with a Shares server.

    For more information, see Adding a Drive Account for Shares on page 14.
*   Sync configuration in Drive and in Shares:

    Pay close attention to the configuration of the sync relationship. In all cases, *the settings on the Shares server override the settings locally in Drive*. Note that if your Shares server is not correctly configured, you may experience sync problems between the server and Drive users.

    For detailed information, see the IBM Aspera High-Speed Transfer Server documentation.

Configuring Sync in Drive

When you use Drive's synchronization capability, you can configure various aspects of the sync relationship. Start by selecting **Preferences > Accounts**.

Selecting Folders to Sync

In most cases, you will have set up sync folders when you added accounts to Drive. But if you opted not to set up sync with your accounts, or if you need to change the the folders on the transfer server that you want the local computer to sync with, do the following:

1. On the **Accounts** tab, select the account for which you want to configure sync folders.
2. In the **Services** area of the tab, click **Sync: Settings**.
    The **Sync Settings** dialog appears.

    Note: If sync capabilities are made available for the transfer server *after* the account has been added to Drive, you must remove and then re-add the account to Drive in order to use the **Sync Settings** dialog.
3. Select the folders on the remote server that you would like to sync with the local computer.

    Browse through the nested folders shown under **Synchronize with the following remote folders**, and select the ones that should be synced with.
4. Set the local path for the sync.

    Under **Local Folder Path**, the default path on the local computer is shown. If you want to change it, click **Browse** and navigate to the desired location.

Configuring the Sync Direction

Drive's synchronization between the remote server and the local computer can be upload-only, download-only, or bidirectional. For a description of these sync direction options and their behavior, see Sync Direction on page 18.

To set the sync direction, do the following:

1. On the **Accounts** tab, select the account for which you want to configure sync direction.
2. In the **Services** area of the tab, click **Sync: Settings**.
   The **Sync Settings** dialog appears.

   Note: If sync capabilities are made available for the transfer server *after* the account has been added to Drive, you must remove and then re-add the account to Drive in order to use the **Sync Settings** dialog.

3. In the **Direction** drop-down list, choose **Two-Way**, **Remote to Local**, or **Local to Remote**.

Resetting the Sync

You can reset the sync at any time; for example when you have changed the sync configuration, or after resolving a sync conflict. When you reset the sync, your sync configuration settings are retained, but the repositories are rescanned for discrepancies. To reset the sync, do the following:

1. On the **Accounts** tab, select the account for which you want to reset the sync.
2. In the **Services** area of the tab, click **Sync: Settings**.
   The **Sync Settings** dialog appears.

   Note: If sync capabilities are made available for the transfer server *after* the account has been added to Drive, you must remove and then re-add the account to Drive in order to use the **Sync Settings** dialog.
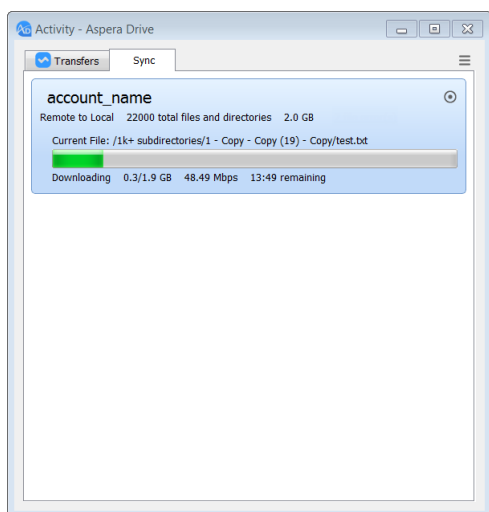
3. Select **Reset Sync** and click **OK**.

Syncing Content

Monitoring Sync Status

You can monitor the status of a sync operation on the **Activity Window > Sync** tab.

A progress bar shows in-progress synchronizations, and a countdown timer shows when the next synchronization will take place.

Stopping and Starting Sync

You can stop and resume file syncing with these buttons on the **Activity Window > Sync** tab:

⊙	Stops an in-progress synchronization.
⊙	Resumes a stopped synchronization.

Resolving Sync Conflicts

A sync conflict occurs when the file on one side does not match the file on the other side. Files and folders may not be synchronized for reasons such as insufficient permissions for the destination folder on the local computer.

If a file or folder cannot be synchronized, a conflict warning appears on the **Activity Window > Sync** tab.

To resolve the conflict, do the following:

1. Click the red **conflict** link.
2. In the dialog that appears, select the file or folder that is in a conflict state.
3. Click **Resolve Selected Conflicts**.

   Drive renames the content on the local file system, appending the phrase **conflict-mine**. For example, the file **log.txt** is renamed as **log.conflict-mine.txt**.

After resolving a sync conflict, you might need to reset the sync. For more information, see #unique_24/ unique_24_Connect_42_resetting_sync.

Working with Cloud Storage

Adding a Drive Account for Cloud Storage

Use Drive's account wizard to configure a transfer account for cloud storage.

To set up a transfer account, make sure you have the following information from the system administrator who manages your transfer server:

- A URL for the transfer server, including a port and path (if applicable).
- A username and password that was set up on your transfer server.

The steps below assume that you have Drive installed and running.

To add a cloud account to Drive, do the following:

1. If the Account Wizard is not open, launch it:

   In the system tray, right-click the Drive icon 🅐 and select **Preferences > Accounts**. Then click ⊞ to add a Drive account.
2. Select your IBM Aspera product:
   Click **IBM Aspera on Cloud**.
3. Fill in the fields with the following information about the transfer server:

Field	Description
Account name	The name of the account. The name is used only by Drive.
Server address	The URL address for the server, and the port number (if applicable).
Username	The username that you have on the transfer server.
Password	The password that you have on the transfer server.

Click **Set up Aspera Drive**.
4. Fill in the following information about your cloud storage:

Field	Description
Cloud Storage	The type of cloud storage. Select either **Microsoft Azure** or **Microsoft Azure SAS**.
Storage account	The account name for the cloud storage you will use. **Note:** For Azure SAS accounts, the URL must have been created with full permissions.
Access key	The alphanumeric key for this storage account.
Path	The path within the storage that this Drive account should have access to.
Use page blobs	Select if your cloud storage uses page blobs.

Click **Next**.
5. When the screen displays a success message, click **Finish** to exit the Account Wizard.

Modifying a Drive Account for Cloud Storage

The steps below assume that you have Drive installed and running, and that you have created at least one Drive account that you want to modify.

To modify a cloud account, do the following:

1. Choose one of the following methods to open Drive's **Accounts** preferences:

   - Right-click the Drive icon in the system tray and select **Preferences > Accounts**.
   - If you have the Drive **Activity** window open, select ≡ > **Preferences > Accounts** .
2. On the left side of the dialog, select the transfer server account you want to modify.
3. Under **Account**, you can change the connection settings for the account:

Field	Description
Account name	The name of the account. The name is used only by Drive.
Server address	The URL for the server, and the port number (if applicable).
Username	The username that you have on the transfer server.
Password	The password that you have on the transfer server.
Do not verify host's SSL certificate	If selected, Drive will bypass the validation of your server's SSL certificate. Select this option if your server's certificate is not valid, but you trust the server.

4. In the **Storage** area, you can configure these aspects of the account:

Field	Description
Storage account	The account name for the cloud storage you will use.
Access key	The alphanumeric key for this storage account.
Path	The path within the storage that this Drive account should have access to.

If you make changes to these fields, Drive then verifies that it can still access the storage. If it cannot, you can revert to the previous settings.

5. Click **OK** to put into effect any changes you have made.

Working with Aspera Encrypted Files

Decrypting Packages

Encrypting a file protects it from unwanted access. When an encrypted file arrives after transfer, you must decrypt it before you can use it.

Note: Decrypting files requires a *passphrase* — a sequence of text that the sender of the package used to encrypt the package. Before decrypting files, ensure that you have the necessary passphrase.

IBM Aspera Crypt works with Drive to decrypt downloaded files.

To decrypt files you have downloaded, do the following:

1. Go to **Activity > Transfers** and select the encrypted package you want to decrypt.
2. Select ☰ > **Unlock encrypted files**.

   The encrypted files are automatically loaded into Crypt. The **Aspera Crypt** dialog appears.
3. Select a package or browse to the encrypted content.

   When the encrypted content is loaded into Crypt, a status message appears at the bottom of the application, displaying the number of items ready for decryption.
4. Type the passphrase into the field and click **Decrypt**.

   You can also choose to decrypt the content later.
5. View the output in the **Aspera Crypt** viewing window.

   The decrypted contents appear in the same directory as the original encrypted contents.

   If the decrypted file (without the **.aspera-env** extension) already exists in the same folder, "*(decrypted)*" is added to the filename.

   If your **Aspera Crypt** viewing window has multiple decrypted items listed, you can use the **View** drop-down list to sort the items by **latest**, **finished**, or **failed**.

Automatic Decryption

As an alternative to the manual process above, you can set Drive to automatically decrypt the packages that it downloads.

Choose one of the following ways to set up automatic decryption:

- When you create the Drive account for Faspex or Aspera on Cloud, select the option to **Automatically unlock encrypted files on download**.
- Modify an existing account to enable this option. For instructions, see Modifying Your Package Download Settings on page 10.

Configuring Your Decryption Settings

You can adjust the settings that are used when packages are decrypted. In the Crypt window, do the following:

1. Click **Settings**.

2. Configure the following:

- **Delete encrypted files when finished**

  When this check box is selected, Crypt removes the encrypted files from your system after the destination (decrypted) content has been created.

- **Number of concurrent threads for decryption**

  Select the number of threads that are decrypting at any given time. A higher setting means that files will be decrypted more quickly, but this may slow down the rest of your computer while it is running. The options are **1** (default), **2**, **4** and **8**.

Drive Preferences

Setting Your Preferences in Drive

Through the **Preferences** dialog, you can set your preferences for the following areas:

- general settings
- accounts
- transfers
- network
- bandwidth

To set your preferences, open the **Preferences** dialog by doing one of the following:

- With Drive running, right-click the Drive icon in the system tray and click **Preferences**.
- If you have the Drive **Activity** window open, select ≡ > **Preferences**.

General Preferences

To set your general preferences for Drive, select **Preferences > General**.

You can set the following preferences in **Preferences > General**:

Field	Description
Automatically launch Aspera Drive when Windows starts	Select this check box to automatically launch Drive when you log into your Windows account.
Remove transfer list items	Select whether to remove the entry automatically from the transfer view after it has completed, or to manually remove items. **Manually** is selected by default.
Logging Level	Choose the level of information to be recorded in the Drive logs. Options are: • **Info** • **Debug** • **Trace** **Note:** Do not change this setting unless Aspera Technical Support asks you to do so.

Click **Apply** or **OK** to apply and save your settings, or click **Cancel** to cancel your selections.

Account Preferences

To create, configure, modify, and remove Drive accounts, select **Preferences > Accounts**.

Adding an Account

- For instructions on adding Drive accounts for use with the Aspera on Cloud SaaS, see Adding a Drive Account for Aspera on Cloud on page 6.
- For instructions on adding Drive accounts for use with a Shares transfer server, see Adding a Drive Account for Shares on page 14.
- For instructions on adding Drive accounts for use with a Faspex transfer server, see Adding a Drive Account for Faspex on page 8.
- For instructions on adding Drive accounts for use with cloud storage, see Adding a Drive Account for Cloud Storage on page 22.

Removing an Account

To remove an account, do the following:

1. In the list of accounts, select an account to be removed.
2. Click ⬚ to remove the account.

   When you remove an account, all account transfers and services associated with that account are stopped and removed.
3. Click **Yes** to confirm the account removal, or click **No** to cancel the account removal.

Configuring Sync Settings

For Drive accounts that are set up with Aspera on Cloud or Shares as the transfer server, you can configure synchronization settings, such as which remote folders to sync with, and the direction of the synchronization relationship.

For instructions on setting up and using synchronization features, see Sync with Aspera on Cloud on page 19 and Sync with Aspera Shares on page 20.

Configuring Package Settings

For Drive accounts that are set up with Aspera on Cloud or Faspex, you can configure the following:

- The local folder for received packages.
- Whether to overwrite packages.
- How often Drive should look for new packages.

For instructions, see Modifying Your Package Download Settings on page 10.

Transfer Preferences

To set your transfer preferences, select **Preferences > Transfers**.

1. Configure settings on the **Transfers** tab:

Field	Description
Enable queuing	When this check box is selected, Drive limits the number of concurrent transfers to the number specified in the **Maximum concurrent transfers** field.

Field	Description
	Any transfers above this value are queued and then started once the number of concurrent transfers drops below the specified value. **Note:** When transfers are queued, you can start them manually from the **Activity > Transfers** window.
Maximum concurrent transfers	If queuing is enabled, you can enter a maximum number of concurrent transfers in this field. By default, a maximum of three concurrent transfers are allowed. When queuing is not enabled, this field is not available.
Automatically retry failed transfers • **Attempts** • **Interval**	When this check box is selected, Drive retries failed transfers. It will make the specified number of retry **Attempts** in a specified time **Interval**. If you want Drive to retry failed transfers, specify the number of attempts and the interval in which Drive will try to resend in seconds, minutes, or hours. By default, this feature is enabled, with three retry attempts and at 30-second intervals.
Sync: Interval	Specify the interval between synchronizations for each account that has the sync feature enabled. By default, synchronizations are set for 30-second intervals.

2. Click **Apply** or **OK** to apply and save your settings, or click **Cancel** to cancel your selections.

Network Preferences

To set your network preferences, select **Preferences > Network**.

1. In the **HTTP Proxy** area, set the following preferences:

Field	Description
Obtain proxy configuration from	Select whether to obtain the proxy configuration from the system, or to provide a manual proxy configuration. By default, **System** is selected. **Note:** If you select **System** and your system settings have changed since you last used system proxy configurations with Drive, you must restart Drive. If you select **Manual**, the **Use HTTP Proxy** fields become available. See below for a description of these fields.
Use HTTP Proxy • **Username** • **Password** • **Address** and **Port**	If you selected **Manual** from the previous drop-down list, use these fields to define your proxy configuration. Type the following information: • your username • your password • your server's URL or IP address, and port number **Note:** For some proxies, username and password are optional.

2. If you will use a FASP proxy for your transfers, set the following preferences in the dialog's **FASP Proxy** area:

Field	Description
Use FASP Proxy (DNAT)	If your transfers will use an IBM Aspera FASP Proxy server, select this check box.
Secure (DNATS)	Select this check box if your FASP Proxy uses a secure connection.
• **Username** • **Password** • **Address** and **Port**	Use these fields to define your FASP Proxy configuration. Type the following information: • your server username • your server password • your server's URL or IP address, and port number **Note:** These fields are enabled only if **Use FASP Proxy (DNAT)** is selected.

3. Click **Apply** or **OK** to apply and save your settings, or click **Cancel** to cancel your selections.

Bandwidth Preferences

Transfer speeds depend on server settings and your network connectivity. To limit transfer rates, go to **Preferences > Bandwidth**.

Take care to click **Apply** or **OK** to make your settings take effect.

Manual Versus Automatic Transfers

The limits you set on the **Bandwidth** tab can be different for transfers that are initiated *manually* versus those that are *automatically* triggered. Automatic transfers can include sync-initiated transfers, script-initiated transfers, or any other kind of background method of starting a Drive transfer.

Settings

Area	Field Name	Description
Manual Transfers	**Downloads: Limit to**	When the **Limit to** check box is selected, you can set the download rate in either megabits per second (Mbps) or kilobits per second (Kbps). The limit you set here will apply to downloads that users initiate manually.
	Uploads: Limit to	When the **Limit to** check box is selected, you can set the upload rate in either megabits per second (Mbps) or kilobits per second (Kbps). The limit you set here will apply to uploads that users initiate manually.
Automatic Transfers	**Background downloads: Limit to**	When the **Limit to** check box is selected, you can set the download rate in either megabits per second (Mbps) or kilobits per second (Kbps). The limit you set here will apply to transfers that are initiated for Inbox downloads or sync actions.
	Background uploads: Limit to	When the **Limit to** check box is selected, you can set the upload rate in either megabits per second (Mbps) or kilobits per second (Kbps).

Area	Field Name	Description
		The limit you set here will apply to transfers that are initiated for sync actions.

Troubleshooting

Where do I find Drive log files?

In the system tray, right-click the Drive icon and select **Open log folder**. Or, if the **Activity** window is open, select ☰ > **Open log folder**.

Alternatively, you can go to **C:\Users*username*\AppData\Local\Aspera\Aspera Drive\var\log**.

How can I reduce the bandwidth that Drive uses?

You can limit the number of concurrent transfers in **Preferences > Transfers**. You can also limit the amount of bandwidth used by each transfer in **Preferences > Bandwidth**. For details, see Transfer Preferences on page 26 and #unique_47.

The system sent me an email notifying me that I've received a package. Why can't I download the package through my Web browser?

To download transferred packages through a Web browser, you must have the IBM Aspera Connect application installed on your local computer.

Go to downloads.asperasoft.com/connect2/ and install Connect so that your browser can download packages from the transfer server.

For more information, see the IBM Aspera Connect User's Guide.

I'm using Drive with a Shares server, but I don't see a way to configure my sync settings.

It may be that Drive needs to re-load sync information for that Shares server or node.

To address this, do the following:

1. Go to **Preferences > Accounts**.
2. Remove the account.
3. Add the account again so that Drive recognizes the sync capabilities.

The **Services** area should now appear on the **Accounts** tab.

I'm using SAML authentication, and am having trouble logging in.

When you quit out of Drive and then restart, the system needs to re-authenticate you with the server. So enter your SAML credentials again when you restart Drive.

Syncing with multiple folders

When your Drive installation is configured with a local-to-remote sync, Drive does not recreate all subfolders of the selected remote sync folder on the local computer. This is the default behavior, intended to reduce confusion since you are not interacting with the subfolders.

If you want to sync into the subfolders, make sure to select them individually (effectively setting up multiple sync relationships).

How can I view thumbnails of video files?

While you can see a preview of image files, and many other file types, in the file browser, Drive does not support video previews.

Technical Support

Support Websites

For an overview of IBM Aspera Support services, visit https://www.ibm.com/products/aspera/support.

To view product announcements, webinars, and knowledgebase articles, as well as access the Aspera Support Community Forum, sign into the IBM Aspera Support site at https://www.ibm.com/mysupport/ using your IBMid (not your company Aspera credentials), or set up a new account.

Technical Support

You may contact Aspera support using the IBM Aspera Support Guide: https://www.ibm.com/support/home/pages/support-guide/?product=3712142

You may contact an Aspera support technician 24 hours a day, 7 days a week, through the following methods, with a guaranteed 4-hour response time.

Phone (North America)	+1 (510) 849-2386, option 2
Phone (Europe)	+44 (0) 207-993-6653 option 2
Phone (Singapore)	+81 (0) 3-4578-9357 option 2

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